

REMARKS

Applicants wish to thank Examiner Chambliss for the productive telephone interview on November 6, 2006. The amendments presented herein are consistent with that discussion and, as discussed, are believed to place the application in condition for allowance.

Claims 1 and 33 are amended herein and Claims 29-32 are cancelled. As a result, Claims 1-28, 33-52 and 63 are pending. Claim 1 is amended to clarify that the oxidized portion of the diffusion barrier is reduced. Support can be found, for example, at paragraphs [0034], [0047], [0049] and [0062]. Claim 33 is amended to indicate that the seed layer is different from the nucleation layer. Support can be found, for example, at paragraphs [0052] through [0054] and Figures 2a-d. No new matter is added by the amendments.

The pending claims were rejected as either anticipated by Soininen (U.S. Patent No. 6,482,740) or obvious in view of Soininen and Elers (WO 01/29893). With respect to Claim 1, applicants previously argued that Soininen reduces a metal oxide layer that has been deposited over a diffusion barrier and thus does not teach or suggest reducing an oxidized portion of the diffusion barrier. In response the Examiner found that "reducing an oxidized portion of the diffusion layer" is not recited in Claim 1. As agreed in the interview, Applicants have amended Claim 1 to clarify that *the metal oxide layer formed by oxidizing a top layer of the diffusion barrier* is reduced. As Soininen does not teach or suggest reducing an oxidized portion of the diffusion barrier, and the lack of teaching is not made up for by the secondary reference, Applicants respectfully submit that Claim 1 is in condition for allowance.

With respect to Claim 33, Applicants previously argued that Soininen does not teach or suggest depositing a conductor over a nucleation layer. In response, the Examiner found that Soininen teaches the deposition of two copper seed layers and thus meets this limitation. Although Applicants disagree with this finding, Claim 33 has been amended to indicate that the seed layer is different from the nucleation layer. As agreed in the interview, Soininen does not teach or suggest a seed layer that is different from the nucleation layer. This deficiency is not made up for by Elers. Thus, Claim 33 is not anticipated by or obvious in view of Soininen and is also in condition for allowance.

Although Applicants continue to disagree with the rejection of Claims 29-32, to facilitate prosecution these claims have been cancelled. The remaining claims depend from independent

Appl. No. : 10/810,415
Filed : March 25, 2004

Claim 1 or Claim 33 and contain all of the features thereof in addition to further distinguishing features. Thus, their allowability follows from the allowability of the independent claims.


Conclusion

For the reasons presented above, Applicants submit that the present Application is in condition for allowance and respectfully request the same. If any issues remain, the Examiner is cordially invited to contact Applicants' representative at the number provided below in order to resolve such issues promptly.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: November 29, 2006

By: 
Andrew N. Merickel
Registration No. 53,317
Attorney of Record
Customer No. 20,995
(415) 954-4114